UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

February 11, 2002

Mr. Tom Siegrist
Macdermid Inc.
245 Freight Street
Waterbury, CT 06702

Re: RCRA Corrective Action Stabilization Report Macdermid Incorporated, 526 Huntingdon Avenue, Waterbury, CT (CTD001164599)

Dear Mr. Siegrist:

Thank you for preparing and submitting a Response to the Environmental Protection Agency's (EPA) comments on the RCRA Corrective Action Stabilization Report, dated March 16, 2001.

The EPA has completed a review of the Stabilization Report and a summary of any comments and questions is contained in Attachment 1. Additional comments are contained in Attachment 2. Please provide a work plan within 60 days, designed to close the data gaps identified for each AOC and all other necessary work with respect to meeting the two Environmental Indicators. The work plan should include complete sampling, analytical and QA/QC plans and procedures for the work. Also submit a detailed schedule for all the proposed work.

Institutional Controls should be proposed as necessary for areas that are inaccessible to direct human exposure due to pavement or buildings. Access to soils beneath pavement and buildings can be restricted by institutional controls in order to meet the HEC EI without the need for the collection of additional data. The institutional controls should specify that no disturbance of the pavement or buildings is allowed until a determination has been made that there is no risk from exposure to soils. It should also specify that the existing data will be reviewed and additional data will be collected as necessary before any digging, excavation and/or demolishing of any structures occurs. Also, specify what plans are in place to ensure that all employees or persons who may be involved with such activity are notified, understand, and maintain awareness of the controls.

Please contact me at (617) 918-1368 if you have any questions.

Sincerely,

Carolyn J. Casey
RCRA Facility Manager

cc: M. Crawford, CTDEP
R. McFee, HRP
J. Wellington, Carmody & Torrance

ATTACHMENT 1

Please note: EPA's initial comments are contained in italic print. Comments on MacDermid's response are in regular type. MacDermid's numbering scheme is used.

General Comments

1. *Please show MacDermid's property line on an appropriately scaled map. Include all property on the north side of Huntingdon Avenue.*

   The North West corner of the map notes "Other Land of MacDermid Incorporated" Please verify if this is owned by MacDermid and include within the highlighted area as appropriate or document that it is no longer owned by MacDermid.

2. *Please verify if the two rusted 55-gallon drums located north of AOC-A are on MacDermid's property. Even if they are not, a release from this disposal area, hydraulically upgradient of MacDermid property, could be impacting groundwater at AOC-A and some follow-up may be necessary.*

   Plans for removal and proper disposal of the drums and any contaminated material beneath them should begin immediately. Please include the proposed work in a schedule and submit a work plan with complete sampling, analytical and QA/QC plans and procedures for the work.

3. *There was obvious trespassing in the area of AOC-A based on the remnants of the bonfire, broken bottles and plastic cups in the area. MacDermid should consider available options for securing this property in consideration of potential trespasser exposure and general liability.*

   No additional comments.

4. *Generally, if it is unknown if surface water poses a risk to recreators, it would also be unknown if sediment poses a risk, unless there was data to support that no risk exists.*

   Please add Steel Brook to any discussions about the Naugatuck River. Both are equal distance from the site (only 1000 feet from several AOCs according to Figure 2). Less than 1/4 mile is not a significant distance with respect to contaminant migration. Both streams have the potential to be impacted from contaminated groundwater discharge and other historic releases. Furthermore, files contain information about a 1991 release of 7,000 gallons from a WWTS holding tank to the Naugatuck River and a 1994 release of copper etchant solution (1,500 gallons) to the Naugatuck River (approximately 12,000 fish killed the day of the 1994 release). Documentation also shows that in 1990 drums containing spent copper etchant were washed at the loading dock and the wash-water was

released to Steele Brook via a catch basin and storm drain system, and chemical spills into Steele Brook via storm sewer or WWTS sewer.

5. *Please provide copies of available aerial photographs.*

   Please provide photographic copies of all available aerial photographs. Also include a color photographic copy of the aerial photograph that is hanging on the wall of the facility

6. *For UST areas where fuel oils were/are stored, total petroleum hydrocarbons and polyaromatic hydrocarbons should be included in the analysis. If not previously included, the lack of this analysis should be listed as a data gap so that this analysis will be included in future sampling.*

   No additional comment.

7. *Any tentatively identified compounds (TICs) should be noted and discussed.*

   No additional comment.

8. *In the tables showing Contaminated Media, in the rationale column for each AOC where the CTDEP RSR volatilization criteria is mentioned, please be more specific as to which criteria was used for comparison (i.e., residential and/or industrial).*

   Regarding monitoring well data at the property boundary, particularly for wells located adjacent to residential properties (e.g., Gear Street), it would be more appropriate to use the residential volatilization criteria than industrial/commercial. Such a screen may be on the protective side (dependent primarily on the depth of contamination and actual distance to homes), but provides a screening approach to evaluate the potential for off-site indoor air issue from groundwater contamination.

9. *A data gap should be identified for each AOC Contaminated Media table where the "unknown" column is checked unless it is clear that no pathway exists (e.g., For AOC G Groundwater Control, there is a SWPC exceedance for zinc but the lack of any surface water data is not listed as a data gap).*

   Soil contamination should be included as a data gap for many AOCs because either no data exists or very limited data exists (one sample in many cases). Although a pathway may not exist for some of these AOCs as the areas are covered w/pavement or buildings, without the history of a unit (have the floor trenches always discharged to the WWTS and have they always been epoxy coated?), the data gaps still exist. For example, at AOC-D: concrete trenches are not impermeable and are often times the source of sub-slab soil contamination, particularly those that may remain wet for periods of time due to the

nature of the processes. Other examples include AOC-A, AOC-F, AOC-K, etc.

In certain cases where institutional controls are used to prevent access to soils beneath building slabs/pavement by restricting any digging or excavating, identifying potential soil contamination data gaps does not mean that sampling will necessarily be required to meet the EIs.

10. *Text summaries of contamination detected for each AOC should also include visual and olfactory observations and elevated PID readings (e.g., Boring log for GZ-3 notes CINDERS/ASH (FILL) from .5-2.5 foot depth; boring logs for GZ-8 and GZ-9 note spoils had a sweet odor; and boring log for GZ-8 also notes sample S-8 was copper colored).*

On page 24, the text summary does not note that sample S-8 from MW-109 (formerly GZ-8) was stained copper colored. Also the last paragraph mentions PID reading of < 0.9 ppm yet the boring log for MW-109 shows a reading of 5.1 ppm. Please revisit this comment again.

Specific Comments

Section 1.2, page 2

1. *Please revise this paragraph to more accurately reflect that the Gear Street building was used for the manufacturing of inks but that this operation rarely or no-longer takes place at the facility.*

No additional comment.

Section 2.1, page 7

2. *Please clarify if AOC-A was used prior to 1978/1979 time frame when it was reportedly used by MacDermid. If so, also include information about who used the AOC and for what reasons (i.e., Was this area used by Waterbury Steel Ball Company?).*

No additional comment.

page 9

3. *The information regarding surface water results contained in the fourth row and column of this table conflicts with that presented in Table 3. Please correct the tables as appropriate.*

No additional comment.

page 11

4. *The lateral extent of the cover for this area should also be identified as a data gap as noted on page 10 under the rationale for surficial soil.*

No additional comment.

Section 2.5, page 29

5. *The last statement in the second paragraph is misleading. Only one soil sample was analyzed for PCBs and the detection limits were elevated.*

   EPA's above comment should have read "oil" and not "soil." Regardless, MacDermid's response was appropriate. All subsequent sampling at this well and adjacent wells should include checks for non-aqueous phase liquids and sampling and analysis should be conducted again. Lower detection limits for PCBs in waste oils should be achieved (i.e., 10 ppm or less).

   Please provide a copy of the gas chromotographic trace, and a copy of the reference chromatogram for the analysis of the light non-aqueous phase petroleum product.

   No additional comments.

Section 2.7, page 38

6. *The rational for surface soil contained in this table mentions 0.013 ug/kg of PCE at TP-5. Please verify this information, table 10 shows mg/kg as the units.*

   This information should be included under the row for soils > 2 feet as the sample was collected from a depth of 8-11', according to Table 10. Please verify and revise as appropriate.

   The rationale for surface soil discusses SWPC but should likely be referencing the GB PMC instead.

   No additional comment.

Section 2.9, page 43

7. *The last bullet states that DEP approval was requested prior to backfilling the excavation. Please provide a copy of the approval letter.*

   The raw laboratory data, chain of custody sheets and field logs should be provided or referenced. What is presented in Table 15 for samples 3 and 4 does not agree with what is on page 51, Known Releases 4th bullet regarding where the sample was collected.

Tables

8. *The more conservative hexavalent chromium standard should be used instead of the trivalent standard if speciation data is not available.*

No additional comment.

In Table1, for AOC L, please revise "transfer" to read "transformer."

No additional comment.

This table provides data for samples collected in April 1986. Please provide copies of these laboratory reports.

No additional comment.

The data contained in this table for MW-101 for sampling conducted 3/95 does not agree with the laboratory reports for MAC-6 contained in Appendix E pages 34-36 and 41. Please revise the summary tables as appropriate.

No additional comment

The data contained in Table 9 for at least MW-108 and MW-109 do not agree with the laboratory reports contained in Appendix F. In addition, vinyl chloride, chloroethane, and p-isopropyltoluene are not reported in the summary tables as being detected. Please revise the summary tables as appropriate.

Duplicate sample results should be reported in the summary tables along with the actual sample result. All duplicate results should be clearly identified as such.

The result for zinc, MW-108 sampling date 2/01 should be 0.098, not 0.048 mg/l. For the same well/date, vinyl chloride should be reported as 0.0027 ug/l, not 0.0024 (also units are missing), and o-xylene was detected at 0.0024, not 0.0027. Please verify all entries in the summary table for at least this well.

Appendix E and F

9. *The well designations in the 1995 Groundwater Data Summary for VOCs, Cyanide and Fluoride do not agree with the designations in the 1995 Groundwater Data Summary for Metals or the 2001 Groundwater Index. Please correct these tables as appropriate and verify that all tables are cross checked throughout the report and against the maps. Submit copies of the older maps showing well locations and previously used well designations.*

No additional comment

Please provide copies of the chain of custody forms for all sampling events.

No additional comment

Appendix G
February 2001 WELL RECEPTOR SURVEY

10. *There is no page 3, please verify if there is a page missing or if the pages were numbered incorrectly.*

No additional comment.

Section 4.0, page 7

11. *It is necessary to know the status of the five water supply wells identified in the 1974 State of Connecticut Water Resource Bulletin No. 19. If these wells are still in use, the uses should be known to evaluate potential exposure routes and potential human health impacts. In addition, the pumping rate and frequency of water withdrawal should be known to evaluate any potential effects on groundwater and contaminant migration.*

Again, it is necessary to obtain information on the use of water supply wells, industrial water supply wells and remediation wells to evaluate potential exposure routes, potential human health impacts and to evaluate any potential effects on groundwater and contaminant migration that pumping these wells may have.

The CTDEP and/or the EPA may have monitoring well data in the files for some of the other facilities (e.g., 346 Huntingdon Ave, 172 and 237 E. Aurora St). This information may be useful to MacDermid in evaluating whether or not there are any off-site impacts.

Figure 2

12. *There are several lots where no information is provided, not even a lot number. Please clarify if these lots are vacant and if this was confirmed by a visual inspection.*

No additional comments at this time.

ATTACHMENT 2

Additional General Comments:

1. As a reminder, please notify EPA as soon as possible, and at least one week, in advance of the initiation of any field work.

2. The tables contain an incorrect Industrial/Commercial Volatilization Criteria for vinyl chloride in groundwater. The value is 0.002 mg/l, not 6.1 mg/l. Please revise and bold/shade any results that exceed the criteria.

3. Sampling should be conducted using the July 30, 1996, EPA Region 1 Low Stress (low flow) Purging and Sampling Procedures. Total metals (unfiltered samples) should be collected. Sampling conducted in 2001 did not follow the low-flow sampling procedures; the chain of custody forms indicate that the samples were filtered in the field with the exception of MAC-1. MacDermid may still choose to collect filtered samples, but this should be done in addition to collecting unfiltered samples for total metals analysis. Please refer to Attachment 3.

   Regarding MAC-1, although the chain of custody form states that total metals are to be analyzed, the lab reports the results as dissolved. Please clarify this apparent discrepancy.

4. Since a work plan was not submitted prior to the sampling, we have no specific information about the sampling procedures used to collect the 2001 data. Please include a summary of the procedures used.

5. Dates provided on the laboratory data sheet indicating when the samples were collected and received by the laboratory are not correct. They show samples were received before the date collected (pages 7-36, Appendix F of the original report). It is not necessary to resubmit these reports but the lab should be informed of this error so that it is not repeated.

6. For future reference, it is not appropriate to change well designations. This makes the review of any older data, boring logs and maps very cumbersome. It may also result in the loss of data over time. Errors were introduced into the summary tables when the well designations were changed; this was not likely to have happened otherwise. The old designations are useful in some respect as they can help to identify who did the work, how many different consultants worked on the site, approximate time frame that the wells were installed.

7. Nested wells (wells at depth) are needed to determine the vertical extent of contamination.

8. A significant amount of additional groundwater sampling has taken place and should be included in the summary tables. In addition, laboratory reports and chain of custody forms for this data should be provided. According to the files, groundwater sampling was also conducted in 8/87, 1/88, 10/88, 10/92, 2/93, and twice 1/94.

9. All available soil/sediment data does not appear to have been summarized in the tables. For example, AOC-K2, the last paragraph on page 58 references Tables 4 and 5 of Appendix M; the soil data contained in Appendix M is not summarized in the tables. Furthermore, the data for one soil sample that is included in Table 17 for AOC-K should, at a minimum, include a sampling date so that the chain of custody and lab reports can be located without too much difficulty. Another example is AOC-E where the sediment data (Appendix K) from Steele Brook and the Naugatuck River have not been summarized.

10. Page 37 of the 2001 lab report indicates that the equipment blank was filtered. This should not be done. The point of collecting this sample is to determine the effectiveness of the decontamination procedures. Filtering interferes with the representativeness of the sample for its intend purpose.

11. The AOC descriptions lack any historical information. For example, on page 61 AOC-K5 - Ink Manufacturing Area: Information regarding potential releases lists only the current containment structure and that the collection sump discharges to the waste water treatment system. Historic information regarding the potential for releases prior to installation of the secondary containment systems and connection to the WWTS should be discussed. Please state whether or not secondary containment and WWTS discharge have been in place throughout the existence of the area. Other examples include AOC-D, AOC-H, AOC-K6, AOC-K7, and AOC-K8.

Additional Specific Comments

Section 2.4, Page 19

12. In the second paragraph last sentence under potential releases, cyanide should not be listed as not detected in soils as Table 6 does not indicate that it was even included in the analyses.

Section 2.5, Page 24

13. In the last paragraph, please verify that MW-8 and MW-9 should read GZ-8 and GZ-9. Also, if this is the case and these wells were renamed, the new designations, MW-109 and MW-108 respectively, should be used. This should be done consistently, throughout the document.

Section 2.5, Page 34

14. The rationale provided for surface soil should be revised from "subsurface soil" to "surface soils."

15. For sediment, the rationale should discuss that the 1994 sampling results (Appendix K) indicate that Steel Brook sediment is likely impacted, particularly in the area of sample number one (at the outfall) and from copper.

TABLES

16. The detection limit with a less than sign, not "ND" or "BDL" should be included in the summary tables. Alternately, detection limits can be included as an additional column. If "BDL" means that the constituent was detected at a level that is less than the reporting limit, this result should be estimated and qualified with a "J."

17. Several tables (e.g., 6, 8, 11, 13) include the note "...Detection limits ranged from 5 ug/mg to 125 ug/mg." Please revise as appropriate.

18. All tables of data should include the date the samples were collected (refer to Tables 4, 6 8, etc.).

Table 10

19. Bold/Shaded results should be defined in the notes as exceeding Pollutant Mobility Criteria, not Surface Water Protection Criteria. This is also the case for Tables 11 and 13. Please verify all tables contain the correct notes.

20. A constituent is listed as 1,1,1-Trichloroethylene, please revise as appropriate.

Appendix M

21. Chain of custody forms and lab results for soil samples collected in 2000, indicate that leachability of metals from soil was analyzed using EP Toxicity leaching procedures. This method has been out of date for many years now and is inappropriate for use in characterizing a solid waste and/or soil leachate concentrations. TCLP should be used for waste determinations and TCLP or SPLP should be used for determining compliance with the CTDEP RSRs.

22. The tables contain incorrect standards for nickel direct exposure, cadmium leachate, TCE direct exposure and leachate. Please verify all standards are current and correct.

23. Page 2 of this Closure Summary refers to Appendix A which only includes TCLP results for one sample. One sample is not typically sufficient to make a determination regarding whether or not a waste is characteristically hazardous.